MISSOURI DEPARTMENT OF CORRECTIONS
TRAINING ACADEMY
LESSON PLAN

COURSE TITLE: Divisional

CLASS TITLE: Search and Rescue

MODULE TITLE: Search and Rescue

Prepared By: Pete Oetting Date: December 2003

OVERVIEW

The SCBA is a critical piece of equipment during an emergency. This class will instruct participants on the nomenclature and use of the SCBA. Ensuring the proper working order of the SCBA will be accomplished through the safety inspection on the SCBA which will be demonstrated with practical application. Proper search and rescue procedures will be practiced.

PARAMETERS

Hours: 16.0 Space: Large classroom

Number: 10-24 per instructor Audience: Institutional staff

PERFORMANCE OBJECTIVES	EVALUATION TECHNIQUES
At the conclusion of this course, participants will be able to: 1. Demonstrate the proper procedure to be used to provide a safety check for the SCBA; 2. Don and doff their SCBA using proper techniques in 45 seconds or less for test purposes; 3. While working with a partner, a search and rescue simulated situation will be accomplished within 10 minutes; and 4.Demonstrate the victim's rescue techniques covered in this material while maintaining the most important item – safety of the rescuer.	Evaluation techniques utilized by the trainer(s) to determine if the performance objectives have been met. 1. Donning and Doffing Test 2. Practical Exercise Test 3. Written Test 4. Class Feedback 5. Trainer Observation

REQUIRED MATERIALS/EQUIPMENT/SUPPLIES NEEDED

X Overheads	___ Projector screen
X Overhead Projector	___Computer & LCD
___Slide show	__X Television(s)
X Videotape Player	___Video Camera
___Posters	___Masking Tape
___Markers	__Easel Pads & Stands

Videotapes:
#1 Video – Self Contained Breathing Apparatus (30 min.)
#2 Video – Training Burn – JC Fire Academy (copy only) (15 min.)
#3 Video – Plan to Get Out Alive – Family Fire Safety Video (45 min.) optional

Other:

Student must bring SCBA and mask (furnished by the facility)
Items for obstacles in the searching area
Written Test & Answers
Practical Test

STUDENT HANDOUTS

Title

Student Manual

INSTRUCTIONAL STRATEGIES

Practical exercise, trainer demonstration, lecture

REFERENCES

The following books and materials were used as a basis for this lesson plan. The instructor should be familiar with the material in these reference documents to effectively teach this module.

TITLE	TITLE
1.	4.
2.	5.
3.	6.

Prerequisite Training/Certification:

Subject Matter Expert (s):

Approved by: *Date Approved:*

ANTICIPATORY SET

This program has been designed for the protection of staff, offenders, and most importantly you, the rescuer, in a search and rescue situation. You are not being trained as fire fighters.

During an emergency situation everything will be happening very fast. It will be chaotic, noisy, and dangerous.

Ask Participants: What should be one of your first concerns when encountering an emergency situation involving a possible search and rescue situation?
Correct Answer: Yourself

If the rescuer is injured and can't perform their job then where does that leave those who need to be rescued?

By attending this training you are already heading in the right direction to do just that. You will be learning the correct use of self contained breathing apparatus. You will also learn procedures to follow to ensure a prompt and safe evacuation and rescue of victims. You will learn warning signs for yourself and those you are rescuing.

I would like each of you to take a few minutes and think about an emergency situation you may have found yourself in. Either at work or in your personal life. I would like to ask those who don't mind sharing, what you felt you did that was a smart move and then something that maybe you thought was a smart move at first but later realized it could have had disastrous consequences.

All these examples show that we start out with good intentions but with adrenalin flowing our most common sense sometimes gets lost or forgotten. Through this training it is hoped that when finding yourself in an emergency, safer training techniques will kick in and therefore result in fewer injuries to those rescued and the rescuers.

VERY IMPORTANT
Before beginning class be aware of anyone with asthma or who may be claustrophobic. Talk to individuals , discuss/work with them, don't make issues in front of class.

This is important and should be stress throughout the course.
Safety of Rescuer
Rescuer meaning 2 people.

Certification is for 3 years, after that certification is done every year.

Lets review what you will be doing today.

Performance Objectives

At the completion of this training the participants will be able to do the following:

1. Demonstrate the proper procedure to be used to provide a safety check for the SCBA;

2. Don and doff their SCBA using proper techniques in 45 seconds or less for test purposes;

3. While working with a partner, a search and rescue simulated situation will be accomplished within 10 minutes; and

4. Demonstrate the victim's rescue techniques covered in this material while maintaining the most important item - **safety of the rescuer.**

Stress "the Safety of the Rescuer" Meaning?

By completing these performance objectives and because of your job at the institution you could be at the emergency when it happens and be able to take appropriate action. Because of your job you would be familiar with the operations, equipment and physical structure of the facility. You could also be the only force available if the public emergency services are delayed or unavailable due to other commitments such as a natural disaster.

The first thing we want to talk about is the hazards you may encounter during a search and rescue situation. As we go through the training **if I say this is an important item,** remember, something similar could be on a test.

Stress to class

INSTRUCTIONAL INPUT

There are four common hazardous atmospheres that a person could encounter which could cause respiratory problems:

- Oxygen deficiencies
- Elevated temperatures
- Smoke
- Toxic gases

Lets look at each of these in more detail.

Oxygen Deficiencies

This is where the oxygen is being consumed by the fire. Normally the air we breathe is approximately 21% oxygen. One of the first warning signs the body has when the oxygen level drops **below 18%** is to increase the respiratory rate (faster breathing).

When the oxygen level drops **between 15%-17%** the muscular skills and coordination are impaired or diminished.

Ask Participants: What type of physical signs would you expect to see from someone in this state?
Correct Response: stumbling, loss of direction, weak in the knees, unable to stand

When the oxygen level is **between 10%-14**% the victim will experience rapid fatigue and faulty judgement, dizziness and headache.

When the oxygen level is **between 10%-6%** collapse is imminent but the victim can still be revived.

If the oxygen level is **less than 6%** death is imminent and will occur in approximately six minutes.

During a rescue effort, time is crucial you and the victim must get out as quickly as possible.

Show video #2
Process video with appropriate questions

Elevated Temperatures

Extreme temperatures due to fire can cause respiratory failure and if the air is moist and heated the damage is worsened.

Inhaling heated air can cause **edema,** this is an accumulation of body fluids in the lungs. (Fluid in the lungs).

Smoke

Smoke is the suspension of small particles of carbon, tar and ordinary dust in the heated gases. Some suspended particles in smoke are merely irritating to the nose and throat while others may be lethal. The size of the particles will determine how deeply into the unprotected lungs it will be inhaled. **This explains why the SCBA will be worn (due to the carbon monoxide in the area) until the area is well ventilated after the emergency has been corrected**. This will ensure the rescuer does not breath in even the tiniest particles.

Toxic Gases

Some toxic gases directly cause disease of the lung tissue and impair its function. Others have no direct harmful affects on the lungs but pass into the bloodstream and other parts of the body and impair the oxygen carrying capacity of the red blood cells.

There can be as many as six harmful gases present at a fire.

I don't want to give the impression that there has to be a fire to have a hazardous atmosphere.

Ask Participants: What are some other situations besides a fire that you might expect to have a hazardous atmosphere? **Correct Response:** Toxic gases can also be found in industrial processes (manufacturing, refrigeration) train derailment with container failure, **confined space rescue**

Ensure all responses are given and

(escapes, tunnels, manholes, sewers, steam tunnels, etc.)

discussed.

A common condition that will be found in an emergency situation is hyperventilation. Hyperventilation is causes by overexertion, breathing normal or above normal air and low levels of CO_2. Hyperventilation can occur in the victim as well as the rescuer.

Ask Participants: What are some symptoms of hyperventilation?
Correct Responses: dizziness, impaired vision, numbness, tingling sensation, restlessness, giddiness, unconsciousness

Remember as many as you can – to make you more aware of symptoms that could create a serious emergency for the rescuer.

You all know that encountering any emergency situation will have hazards and be dangerous. We just talked about the warning signs to look for in yourself or a victim. Now we will get into the actual use of the SCBA which will be your life line to remaining safe during an emergency situation specifically those that involve hazardous atmospheres.

There are two types of SCBA systems. **The closed circuit system and the open system**.

1. The closed circuit system is also called a re-breather which recycles the user's exhaled breath. After removing carbon dioxide and moisture, this system will add supplemental amounts of oxygen as needed. These units get very hot for the user with extended or prolonged use. Nothing is released from the system back into the atmosphere. The Department of Corrections has none of these systems in use.

2. Of the open systems there are two types – demand and positive pressure.
Demand – Air is provided to the user on demand (whenever the user inhales). The main line is carried open at all time this was outlawed by the government in the 1980's.

Positive Pressure –Air is provided to the user on a continuous basis. Air inside the mask is slightly higher than the atmosphere (21%). It reduces contaminants from

leaking into the mask. There is no buddy breathing. Main line valve is closed until low pressure line and mask are properly connected to the regulator.

Nomenclature of the SCBA

Lets take a look at the nomenclature of the SCBA. You will also find a diagram in your manuals. We will fill in the diagram and demonstrate the items after they are discussed.

Trainer will also have the SCBA to identify all the parts.

1. **Face Piece Straps**

   Used to secure the face piece to the user and to keep out contaminants. **Bottom straps are secured first.** All straps are pulled straight back when tightening, if pulled out to the side this will damage the straps.

2. **Exhalation Valve**

   This valve allows the user to expel spent breath from the face piece.

3. **Face Piece Lens**

   Allows the user to view the surroundings without being exposed to any harmful elements.

4. **Low Pressure Line**

   Provides fresh air to the user at a normal pressure.

5. **Cylinder**

   The cylinder holds the compressed air supply, sizes may vary. The contents are compressed air **which is not oxygen for medical purposes.** Full cylinder contains approximately 2216 P.S.I. of compressed air which is a supply of air to the user for approximately

30 minutes. **A rule to determine the amount of time left on a cylinder is that 100 P.S.I. equals approximately one minute of air**. The low pressure alarm sounds when the air supply is down to approximately five minutes of air. **When the low pressure alarm sounds the rescuers (both) will leave the area immediately.** Immediately egress the building with your partner.

6. **Chest Strap**

Used to secure the self contained breathing apparatus (SCBA) to the user. Excess straps should be secured to avoid problems later. This could catch on something, someone could grab it, or just be in the way while crawling during search and rescue.

7. **Shoulder Straps**

Used to secure the SCBA to the user. Excess straps should be secured to avoid problems later. This could catch on something, some could grab it, or just the in the way while crawling during search and rescue.

8. **Back Plate**

Used to hold the air cylinder in place.

9. **Main Line Valve**

This valve controls the pressure of air coming from the cylinder and regulator to the user. **The difference in the main line valve and the by-pass valve is shape and location.**

10. **High Pressure Line**

This line carries the high pressure compressed air from the cylinder to the regulator.

11. **Waist Strap**

Used to help secure the self contained breathing apparatus (SCBA) to the user. Excess straps should be secured to avoid problems later. This could catch on something, some could grab it, or just the in the way while crawling during search and rescue.

12. **Cylinder Pressure Gauge**

This gauge indicated the amount of compressed air in the cylinder. **The cylinder pressure gauge and the line pressure gauge readings should be approximately equal**.

13. **Cylinder Valve**

This is the control valve located on the cylinder. It controls the compressed air flow coming from the cylinder to the regulator.

14. **Line Pressure Gauge**

This indicates the compressed air pressure going to the regulator from the cylinder. Pressure readings at the cylinder pressure gauge and the line pressure gauge should be approximately equal.

15. **By-Pass Valve**

This allows the user to by-pass the regulator controls of compressed air in an emergency and get compressed air directly from the cylinder. **The difference in the by-pass valve and the main line valve is shape and location.**

When the by-pass valve is used, the by-pass valve is turned on slowly until the user can feel air in the mask, the main line valve is turned off and the by-pass valve is adjusted to conserve air. The by-pass valve when used should be turned on slowly to

reduce the possibility of either blowing the mask off the user or damaging the user's eyes or other organs. **The pressure coming from the by-pass valve is equal to the pressure in the cylinder!!!!**

16. **Regulator**

This controls and regulates the pressure coming from the cylinder to the face mask. **The regulator must be protected at all times.**

17. **Cylinder Strap**

This strap is used to secure the cylinder to the back plate.

18. **Low Pressure Alarm**

When the low pressure alarm sounds there is approximately three to five minutes of air remaining in the cylinder. **When the low pressure alarm sounds egress the area immediately with your partner!!!!!!!!!!**

Ask Participants: How much time is left in a cylinder with 200 P.S.I. of oxygen
Correct Response: two minutes (one minute per 100 P.S. I.)

Ask Participants: At what level will the low pressure alarm sound?
Correct Responses: approximately with five minutes left or 500 P.S.I. of oxygen

Ask Participants: When the low pressure alarm sounds, what should you do? (You meaning you and your partner)
Correct Responses: Immediately egress the building with your partner (search rescue team)

GUIDED PRACTICE

To ensure all of you are familiar with the equipment, I want you to pair up with someone. Take turns naming the parts of the SCBA while describing what it is for or why it is important. You can use your manuals to assist yourself if needed. As a pair you will have ten minutes to complete this.

Ask Participants: If you were not familiar with your equipment, what could be a worse case scenario?
Correct Responses: improper use of equipment may cause equipment failure; not knowing the amount of oxygen you have left; not responding appropriately to low pressure alarm; death

You need to become very familiar with your equipment. If you are not, you could be the next victim and that helps no one. Someone then has to rescue you.

INSTRUCTIONAL INPUT

Besides just being familiar with your equipment you need to know the safety checks to do to ensure the equipment is always in good working order and ready at a moments notice. These safety checks differ with each facility, S.O.P.'s.

Safety Checks on SCBA

- **Safety checks should be done daily.**
- **Check the cylinder pressure gauge.** When full the gauge should read approximately 2216 P.S.I., if lower contact your Institutional Safety Manager.
- **Ensure Face Piece is clean with no cracks or damage.** Straps must be in good working order.
- **Check all pressure lines** for damage or wear and abuse.
- **Check all straps** to assure it is in good working

Trainer will demonstrate how and what to look for during a safety check.

Institutional SOP may vary – consult safety manager.

order. Be sure to look for excessive wear.

- **Check exhalation valve** for proper functioning.
- **Check all gauges** for proper readings.
- **Check low pressure alarm** to be functioning properly.

Please note the check of extending all straps is not part of the daily safety checklist but will be completed while in training.

GUIDED PRACTICE

To ensure all of you are familiar with the safety check of the equipment, I want each of you to run through a safety check with the equipment you have with you. I want you to pair up with someone. Take turns and do a safety check of the SCBA describing what you are looking for. As a pair you will have ten minutes to complete this.

Ask Participants: What would be the reasoning behind doing a daily safety check of the SCBA?
Correct Responses: To ensure it is ready for use at all times; for your own safety when using the equipment;

Ask Participants: If you were to find a problem with your equipment what should you do?
Correct Responses: Contact the Institutional Safety Manager immediately for a replacement or repair.

Ask Participants: By doing this daily, how long should it take you to complete a safety check.
Correct Responses: 5-10 minutes

These would be a very important 5-10 minutes a day if it means the difference between saving your life and that of another or not saving a life.

You know the parts to your equipment and how to do the

safety check. All which is very important before you ever begin to use the SCBA. Now you will learn how to don and doff the SCBA.

INSTRUCTIONAL INPUT

Donning (putting on) the SCBA

1. **Open the case** and position the SCBA with the cylinder valve away from the user.
2. **Take the face piece from the case** and position it where it is convenient for the user.(left or right side)
3. **Kneel or stand at the end , opposite the cylinder valve.**
4. **Tilt the unit up to check the gauges** and the valves, turn the cylinder valve on (about three turns for test purposes). In actual use turn on all the way.
5. **Listen for the low pressure alarm**, if this does not sound, the cylinder valve should be turned off – the air drained, then the unit turned on again to check for the low pressure alarm.
6. **Grasp the unit with both hands** and lift over your head onto your shoulder blades while leaning forward.
7. **Grasp the shoulder straps** and pull straight down to tighten (secure excess strap in actual emergency)
8. **Connect waist straps** and pull tight (secure excess straps in actual emergency).
9. **As you straighten** up bring face piece to face.
10. **Place face piece to face** with straps over front of the lens (chin first).
11. **Hold face piece to face** while pulling harness straps

Trainer demonstrates how to don and doff the SCBA as participants watch. Next the trainer will do step by step again as participants follow along, then there is a guided practice.

over your head.
a. **Tighten bottom straps FIRST**
b. **Tighten temple** straps **second**
c. **Tighten top** straps **last**
d. Tighten all straps by pulling to the rear and straight back. **Pulling straps straight out will damage the straps.**

12. **Check face piece seal**
a. **Exhale** deeply
b. **Seal low pressure line** with the palm of hand
c. **Inhale** deeply and slowly

Result: Will cause a vacuum and mask will tighten on face.

12 & 13 can be done in combination for test purposes. Take deep breathe, seal low pressure line, exhale, then inhale one after the other, both will be checked.

13. **Check exhalation valve**

a. **Inhale deeply**
b. **Seal low pressure line** with palm of hand
c. **Exhale** deeply and slowly

Result: Breath will be expelled through exhalation valve only.

14. **Connect low pressure line** to regulator, open main line valve, as you connect the low pressure line

Now we will demonstrate doffing the SCBA.

Doffing (removing) the SCBA

1. **Completely unscrew**, but do not remove low pressure line from the regulator. **Do not touch main line valve while unscrewing low pressure line.**

Trainer demonstration

2. **Close main line valve** while removing the low pressure line from regulator.

3. **Loosen straps** of face piece

4. **Grasp bottom of face piece** pull out and down, then remove over your head. Carefully place mask in a safe area.

5. **Unhook** waist strap

6. **Unhook** chest strap

7. **Release tension** on shoulder straps by placing thumbs in eye latch and pulling straight up.

8. **Pull right hand under the right shoulder strap**
   a. **Grasp** the top of the left shoulder strap with your right hand
   b. **Use your left hand** to hold and **PROTECT THE REGULATOR**
   c. **Carefully swing** the SCBA unit from your shoulder

9. **Carefully place** the unit down with the cylinder valve facing away from the user

10. **Turn** the cylinder valve off

11. **Bleed** the excess pressure from the system
    a. **Open the main line valve** slowly
    b. **When low pressure alarm sounds, turn main line valve off**

All straps must be fully extended. Leave the unit the way you found it.

NOTE: Safety of Rescuer is most important!!!

You have had the opportunity to watch the trainer demonstration and also donning and doffing the SCBA along with the trainer. Now you will do this on your own.

GUIDED PRACTICE

Again, select a partner. This is not a test in speed. Be sure to follow the instructions that were given plus you can use your manuals. It is important to follow those steps. You can practice this several times with your partner. You will have 1

Trainers will observe

hour to practice with your partner. When ready the trainer will have you demonstrate for them the correct procedure for donning and doffing the SCBA.

Ask Participants: When donning the SCBA face piece which strap must be tightened first?
Correct Responses: the bottom straps

Ask Participants: How do you check the seal of the face piece?
Correct Responses: exhale deeply, seal low pressure line with the palm of your hand, inhale deeply and slowly

Ask Participants: When doffing the SCBA what is the first step?
Correct Responses: Completely unscrew the low pressure line form the regulator but DO NOT remove.

Ask Participants: When removing the SCBA from your shoulder what do you want to be very careful to protect?
Correct Responses: The regulator

Ask Participants: The cylinder valve, whether donning or doffing should always be facing which way?
Correct Responses: away from the user.

Ask Participants: The low pressure alarm will sound when? When the low pressure alarm sounds, what should you and your partner do?
Correct Responses: when the cylinder has 5 or less minutes of oxygen left. Egress immediately with your partner.

Ask Participants: How will this exercise aid you on the job?
Correct Responses: the practical exercise ensures I will be able to don and doff the SCBA if needed in the proper manner; the safety checks are needed to keep the SCBA in good working order at all times; will ensure the safety of the rescuer; the more familiar you are with the SCBA the more relaxed you will be, thus using less air and being better able to perform.

participants as they don and doff SCBA.

Participants can do the practical test at this time or opt to test at the end of the class.

After using the SCBA you will want to inspect, care and store the SCBA properly. That is what we will look at now. Institutional SOP may vary, consult with the safety manager.

Show video #1
Process video with appropriate questions

INSTRUCTIONAL INPUT

Inspection, Care, and Storage of SCBA

The inspection, care and storage of the SCBA will differ with each facility's S.O.P.

1. **All parts** will be inspected for damage visually.

2. **Notify institutional safety manager** for recharging of cylinders

3. **Clean and sanitize the face piece** if instructed by the institutional safety manager.
   a. **Wash** in warm water with mild detergent
   b. **Rinse** in clear water, only
   c. **Air dry only**, no artificial means (ex. Hair dryer, stream or other means). You can remove excess moisture from the unit with a soft cloth.

4. **Ensure all straps are to be fully extended** before replacing unit in case.

5. **Face piece** is to be placed in plastic bag or pouch after it is completely dry to reduce possibility of contamination build up.

While doing the inspection you may realize the cylinder needs to be changed. Lets look at how to this.

Cylinder Changing

During emergency use or inspection it may be necessary to change the cylinder. The following procedure will be followed. If possible change the unit while being worn. Explain all actions to user – protect user at all times.

1. **Close** the cylinder valve

2. **Release** pressure from the high pressure line
   a. **Open the main line valve**, SLOWLY
   b. **Listen for the low pressure alarm**
   c. **Close the main line valve** (hand tight)

3. **Disconnect high pressure line** from the cylinder

4. **Release cylinder strap** and remove cylinder instructing the wearer of your intentions and protecting the back of the wearers head with your hand. Empty cylinders controlled in specific area.

5. **Slide** the full cylinder into the back plate and correctly position the valve outlet before securing the cylinder strap.

6. **Check** the cylinder valve opening and high pressure line connections for debris and the 0-ring placement.

7. **Connect high pressure line** to cylinder, **HAND TIGHT ONLY**

8. **Open** cylinder valve
   a. **Check** cylinder and regulator gauges
   b. **Listen** for low pressure alarm

We just covered inspecting, care, and storage of the SCBA as well as how to change out the cylinder. You will now get the chance to change out the cylinder.

GUIDED PRACTICE

With a partner switch the cylinders from one SCBA to the other and then switch back again. Follow the instructions just given. You will have approximately 30 minutes to accomplish this.

Ask Participants: What difficulties did you have in changing the cylinder?

Possible Responses: answers will vary

A search and rescue situation has its own inherent dangers. But there are several emergency situations that could arise with the SCBA. You need to know what to do if any of these problems arise while using the SCBA.

INSTRUCTIONAL INPUT

Emergency Situations

Regulator Failure (evident because you will immediately have on air)

1. **Communicate** problem with your partner immediately
2. **Use the by-pass valve**
3. **Open the by-pass valve** slowly and slightly due to high pressure involved. Close the main line valve, readjust the by-pass valve

Immediately egress the building with partner!!!
Safety of the rescuer is most important!!!

Air exhausted or unable to get air

1. **Communicate** problem with partner immediately
2. **Disconnect** the low pressure line from the regulator
3. **Tuck** low pressure line under your arm or in clothing (SCOTT SCBA systems differ)

Immediately egress the building with partner!!!
Safety of the rescuer is most important!!!

Low pressure alarm sounds

1. **Communicate** problem with partner
2. **Immediately** egress the building with your partner

Safety of the rescuer is most important!!!

Ask Participants: Why would the low pressure alarm sound?
Correct Responses: when the cylinder has 5 or less minutes of oxygen left.

Ask Participants: When a situation occurs involving the equipment what should be your first action?
Correct Responses: communicate with your partner about the problem.

Ask Participants: What could cause you to be unable to get air?
Correct Responses: pressure too low, faulty hose, regulator

Be sure all are mentioned.

GUIDED PRACTICE

Now you will be given an hour to practice. After that hour you will each be tested on your ability to don and doff the SCBA. During the testing time you will have 45 seconds to complete. I will tell you when to begin and I will stop timing when you have completed the task. This is a Pass/Fail situation.

Stress requirements – 45 seconds begins when low pressure alarm sound until first breath is taken
Still graded on procedure until through.

INSTRUCTIONAL INPUT

You all know about the equipment, safety checks, how to don and doff the SCBA and what to do if there is an emergency with the equipment itself and how to change the cylinder out. Now you are ready for the search and rescue portion of the training.

Search and Rescue

Ask Participants: What are some types of emergencies that could be encountered?
Correct Responses: burning buildings; collapse due to earthquakes or severe weather; dangerous chemical spill; gaseous area; oxygen deficiency within a confined space

Search Practices

When you approach the site of the emergency the first thing you want to do is **(1) evaluate the situation**. Ask yourself if the search and rescue can be accomplished safely. Are there trained personnel available? Is the proper equipment available? And above all consider the situation in regard to **the safety of the rescuer.**

(2) The search team is a team of two. Never enter by yourself.

(3) Search teams are to be tethered together by a 6 foot line. The use of a tether allows larger areas to be covered or searched and the tether will also aid in the removal of victims.

(4) Enter at the perimeter moving to the right. Anchor person moves to the right while maintaining contact with the wall **at all times.** Tethered person works to the center. Anchor person maintain contact with the wall about 12" to 18" from the floor. **Anchor person controls the search.**

(5) Verbal communication between team members is very important. The anchor person is the only one who knows exact location and how to get out. Verbal communication is also used to assist in location of the victims. Must stop and listen for victims response. Talk to victim and have them come to your voice.

(6) Occasionally the team must stop and listen. Could hear call for help – calling out – hitting pipes, tapping etc.

Ask Participants: What might you be listening for?
Correct Responses: victims, team members, air, fire, falling debris, tapping, calling out.

(7) Check all doors:

a. Anchor person tells tether person when a door is found. Anchor person will immediately try to determine direction the door opens and if the door is HOT. While this is being done the

tether person will move up to the door and be prepared to control the door (opening or keeping closed).

b. Anchor person will check the door with the back of their hand, if hot, reflexes will cause you to immediately jerk your hand away, causing injuring to the top of the hand.

c. Tether person will immediately move up to the door to reduce the possibility of victims throwing the door open and injuring the search and rescue team members

d. Victims are instructed by the tether person to crawl out and hold the persons ankles in front of them, first person out will hold the ankles of the tether person.

As they come out have the first one grab the ankles of the tether person and crawl out similar to a snake.

NEVER SPLIT UP THE RESCUE TEAM

8) Anticipate the actions of the victims

- **Control the situation at all times**
- Victims are scared – out of air – or in a state of panic
- They can hear you breathing and want your air

9) Egress building with reverse procedure

- Anchor person backs out
- Do not turn around to exit
- Do not lose contact with the wall

NOTE: Safety of the rescuer is most important!!!

You will now get to practice a search and rescue operation.

GUIDED PRACTICE

You will be put into teams of two. One anchor with one tethered. Your face piece will be blacked out to give the feel of a smoke filled room. You will have to rely on each other

for this practice. Remember to communicate with your other team members. Each person will get to experience being the anchor and tethered.

Ask Participants: What is done first when coming upon an emergency situation?
Correct Responses: Must evaluate the situation for safety, Are there trained personnel available? Is the proper equipment available?

Have the room arranged with obstacles. Must have one trainer per team as they are practicing.

Ask Participants: When entering at the perimeter, what direction should you take?
Correct Responses: Move to the right, working toward the center

Ask Participants: Who will maintain contact with the wall at all times?
Correct Responses: The anchor person

Ask Participants: What should always be your first concern in any emergency situation
Correct Responses: The safety of the rescuers

This practice has allowed you to conduct a search during an emergency situation. Now we will go over what to do if a victim is found and how to rescue them.

INSTRUCTIONAL INPUT

Show optional video #3 Process video with appropriate questions.

Victim Rescue Techniques

When a victim is found there are several techniques that can be used to rescue a victim by assisting the victim to egress. No one will be there to assist the search and rescue team, so whatever you feel will work for you and your partner should be done. Whatever is decided must be implemented immediately. TIME, AIR SUPPLY, AND THE SIZE of the victim(s) will be a determining factor. Above all remember "THE SAFETY OF THE RESCUER IS THE MOST IMPORTANT". These are the fireman's carry, extremity carry, and/or the clothes drag, These will be demonstrated

for you and then you will practice them.

Action must be taken immediately – no discussion – **ANCHOR PERSON IN CONTROL**

Fireman's Carry

When deciding to use the fireman's carry a major determination will be the size of the victim. Do not stand up. **Safety of the rescuer is most important.**

Extremity Carry

Check extremities for injuries. Do not stand up. **Safety of the rescuer is most important.**

Trainer demonstration for each technique

Clothes Drag

Again, a major determination in using this technique is the size of the victim. You **grasp** the victim by their clothing, **behind their head** by the collar. Drag head first, this will not create any problems. If lying on a bed – use the blanket or sheet.

Safety of the rescuer is most important.

Assist Victims

Upon finding the victim, if the victim is able to move on their own assist them to egress. Do not stand up. Be prepared to control the situation at all times. Be prepared for actions of the victim(s). **Safety of the rescuer is most important.**

Ask Participants: What are some of the actions we talked about that you need to be prepared for by the victim? **Correct Responses:** They will probably be scared, in a state of panic, out of air, they may reach for you or your air.

The choice of victim rescue technique to use is up to the rescue team and the situation. The team will use whichever method they deem necessary. Whatever the method it is **important to take action immediately.**

GUIDED PRACTICE

In the teams you used for the rescue exercise you will now practice the victim rescue techniques just covered. Each person of the team should play the victim and the rescuer for the techniques. You will have approximately 15 minutes to practice this.

Assist victim to egress. DO NOT stand up. Control the situation at all times – be prepared for any actions.

Ask Participants: What will determine the type of victim rescue technique the team should use?
Correct Responses: size of victim, injuries, situation, safety of the rescuer

In a rescue situation, the rescuers will have a lot of things to be taking into consideration. Throughout this training we have tried to stress the importance of the rescuer. With that in mind we need to talk a little bit about what to do if a situation seems to be getting out of control.

ACTION MUST BE TAKEN IMMEDIATELY NO DISCUSSIONS

INSTRUCTIONAL INPUT

Rescuer Distress Situations

Ask Participants: Can anyone think of an example of when or how a rescuer may be placed in a distress situation
Possible Responses: cylinder becomes empty sooner than expected, become disoriented during a search, equipment malfunction

In any of these situations always remember that your partner is nearby.

Do Not Panic. Remain calm, your partner is there to depend on. Remember that rapid breathing uses up valuable air which can lead to other problems.

If you get disoriented or get lost, **Stop and Think** what did I do to get where I am, what turns were taken, what if any objects were moved.

The following are tips to find your way out in an emergency.

What if .... contact with the wall is lost by the anchor person

- You should crawl in a straight line, in one direction, Crawl in a straight line by right hand to right knee and left hand to left knee **and/or**
- You must re-establish contact with the wall, then crawl in one direction and
- Call out and make noises

Safety of the rescuer is most important.

You will now be given a written test over the material. You must receive a score of ____70%_____ or better to pass. You will also be required to pass a practical test which is pass/fail.

Testing

EVALUATION/CLOSURE

Ask Participants: What is the most important thing to remember from this training?

Correct Response: The safety of the rescuer is most important to remember.

Stress again and again the safety of the rescuer

That is correct. A search and rescue team consists of only two persons. The anchor person, who controls the search and rescue and the tether person, who is responsible for the actual search and rescue portion of the search. If the search and rescue team does not take care of themselves and each other (safety of the rescuer), they are not part of the solution but become additional problems for someone else.

The more comfortable and familiar you are with the SCBA equipment, the longer the cylinders will last and then there will be less stress and strain to the bodies of the rescue team. The search and rescue team will be able to make more expedient and successful rescues. By reviewing the equipment on a regular basis it will keep the rescuers familiar with a very important piece of equipment, thus the user will not be hesitant about using the SCBA unit during

an emergency situation.

We create additional problems to ourselves and others by not utilizing the proper equipment for the job (SCBA for search and rescue). The search and rescue techniques you were taught in the class will make for safer responses by the team as well as for the victim(s).

There will be no one to assist you during the search and rescue other than you and your partner. The rescue techniques the search and rescue team decide to utilize must be done **immediately**. There will be no time for discussion or to take a vote on what to do. **You must do it immediately.**

Lets review some of the highlights of this program.

Ask Participants: Who controls the actions of the search and rescue team?
Correct Response: The anchor person

Ask Participants: Who is responsible for the actual search and rescue?
Correct Response: The tether person

Ask Participants: What oxygen level indicates that death is imminent?
Correct Response: less than 6%

Ask Participants: During an emergency, how long should the SCBA be worn?
Correct Response: Due to the carbon monoxide in the area the SCBA will be worn until the area is well ventilated.

Ask Participants: What type of SCBA does the DOC utilize?
Correct Response: Positive pressure SCBA

Ask Participants: What should you do when the low pressure alarm sounds?
Correct Response: You need to egress the building

immediately with your partner

Ask Participants: How much oxygen (approximate minutes) do you have in your SCBA when the low pressure alarm sounds?
Correct Response: approximately 5 minutes

The search and rescue team must anticipate any actions or situations that can possibly be encountered. The victim(s) will be disoriented, injured, scared, feeling helpless, or needing air very badly. They will do anything to get help.

You must be **prepared** for anything.

Ask Participants: After finding a victim and starting out one of the units low pressure alarm goes off. What does this team do?
Possible Responses: Remember safety of the rescuer.. Must decide to immediately egress or continue to assist victim.

Ask Participants: The team finds multiple victims. What does the team do?
Possible Responses: Try to take several out or get one out –move others close to wall. Explain location to next rescue team going into area.

Ask Participants: What might you expect upon finding the victim(s)?

Possible Responses: panic, reaching and/or pulling at your clothes, mask, rope. etc.

You are not being trained as **firemen**!!!! You do not need protective gear because if you remember **"the safety of the rescuer is most important"**, you will not get into a situation where you need protective gear. If you think the possibility exists that your uniform could possibly melt due to the heat then you have already ignored the number one item discussed with the course.

PRESENTATION GUIDE	TRAINER NOTES

Safety of the rescuer is most important.

Lets take a look at our performance objectives and see if we met them all.

At the conclusion of this course, participants will be able to:

1. Demonstrate the proper procedure to be used to provide a safety check for the SCBA;

2. Don and doff their SCBA using proper techniques in 45 seconds or less for test purposes;

3. While working with a partner, a search and rescue simulated situation will be accomplished within 10 minutes; and

4. Demonstrate the victim's rescue techniques covered in this material while maintaining the most important item - safety of the rescuer.

You have been allowed to practice each step in the search and rescue process. You have been tested mentally and physically.

The student guide should be kept as a handy individual reference. When questions arise in the future abut the SCBA or other information may be needed to stay current and familiar with the equipment this is a very good source.

I hope that nobody ever has to use the SCBA, but if you do with this training it will be possible to assist the victim(s) of an emergency and still maintain the most important item.

Which is ...

The Safety of the Rescuer is Most Important.